

Dr. Molly O'Neil Baringer
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Research Interests

Meso-scale to large-scale ocean circulation associated with the global meridional overturning circulation

Current Projects

Measuring the strength of western boundary currents in the North Atlantic (Florida Current and Deep Western Boundary Current), Monitoring the meridional overturning circulation as part of the RAPID/MOCHA program at 26°N in the Atlantic, High-density XBT observations, Global full water column repeat hydrography and coastal CO₂ surveys. Lead group of technical engineering and sea-going staff, supervise 4 Federal employees, 2 Cooperative Institute employees.

Present Position

Supervisory Oceanographer, ZP V (GS 15 equivalent), with the *National Oceanic and Atmospheric Administration, Atlantic Oceanographic and Meteorological Laboratory, Physical Oceanography Division*, Miami, Florida.

Other Affiliations

Adjunct Associate Faculty, *University of Miami, Rosenstiel School of Marine and Atmospheric Science*, Miami, 2001-present

Fellow, Cooperative Institute for Marine and Atmospheric Sciences, University of Miami, 2007 – 2010

Experience

Oceanographer, *National Oceanic and Atmospheric Administration, Atlantic Oceanographic and Meteorological Laboratory, Physical Oceanography Division* Miami, Fl 1994 – present

Graduate Research Assistant, *Woods Hole Oceanographic Institution, Department of Physical Oceanography* Woods Hole, Mass. 1987 - 1993

Research Analyst, *Jaycor, Modelling Division, Naval Oceanographic Research and Development Activity* Stennis Space Center, Miss. 1985-1987

Education

PhD in Physical Oceanography, 1994
Massachusetts Institute of Technology, Joint Program with the Woods Hole Oceanographic Institution, Cambridge, Mass.

Bachelor of Science in Mathematics, 1985
Newcomb College, New Orleans, La.

Awards

- Department of Commerce Bronze Medal awarded to the Western Boundary Time Series Team, 2007
- Sigma Xi scientific Research Society, induced at MIT.
- Office of the Naval Research – Secretary of the Navy Fellowship, 1987-1990

Graduate Students and Post Doctoral Fellows

- Postdoctoral Student: Tania Casal (2008 – 2010)
- Postdoctoral Student: Deb Shoosmith (2003-2005), co-advised with W. Johns and L. Beal
- Postdoctoral Student: Sonia Bauer (2000-2002)
- University of Miami Graduate Research Assistants: Ivan Lima, Ivan Soares, Carlos Lentini, Lew Gramer (2006)

National and International panels and committees

- International Clivar Atlantic Implementation Panel, 2009-present.
- Clivar Repeat Hydrography CO2 Scientific Steering Team, 2008-present.
- Clivar Atlantic Meridional Overturning Circulation Science Team, 2008-present.
- NOAA Integrate Process Team Panel, 2010-2011
- NOAA North Atlantic Regional Team Climate Working Group, member, 2008-2010.
- Ocean Research Priority Plan (ORPP) Implementation Strategy Panel, 2007 (jointly sponsored by NOAA, NASA, NSF and CLIVAR).
- NOAA North Atlantic Regional Team, NOAA, 2007-2009.
- American Geophysical Union (AGU) Secretary in Physical Oceanography, 2002-2006.
- AGU fall meeting committee, 2005.
- AGU fall meeting committee, 2004.
- NOAA OAR Fleet Allocation Strategic Plan Panel, 2004.
- CLIVAR working group on Deep Ocean Mixing, 2004.
- AGU fall meeting committee, 2003.
- NOAA OAR Fleet Allocation Panel, 2002-2004.
- AGU fall meeting committee, 2002.
- NOAA OAR Decadal to Centennial Research Strategic Planning Panel, 1999-2001.
- Sargasso Sea Ocean Observatory Committee, 2001.
- NOAA/OAR Best Paper of the Year Award Panel, 1998.
- JGOFS/WOCE Carbon Transport Workshop Organizing Committee, 2000-2001, Southampton, UK, held June 2001.

Local panels and committees

- NOAA/AOML Hiring Panel: Oceanographer ZP IV/V, 2012.
- UM/CIMAS Assistant Scientist Search Panel, 2012, Member (hired D. Volkov)
- UM/CIMAS Postdoctoral Search Panel, 2010, Chair (hired V. Hormann).
- NOAA/AOML Hiring Panel: Oceanographer ZP IV/V, 2010, Chair (hired G. Foltz).
- NOAA/AOML Hiring Panel: Oceanographer ZP IV/V (closed August 2008), 2008, Chair.

- UM/CIMAS Postdoctoral Search Panel, 2007-2008, Chair (hired Tania Casal).
- NOAA/AOML Hiring Panel: Oceanographer ZP IV/V 2007-2008, Chair (closed March 2008).
- NOAA/CIMAS Hiring Panel: Research Assistant Scientist, 2007, Chair, (hired S. Dong).
- NOAA/AOML Hiring Panel: Engineering Support ZP II, 2006 (hired P. Pena).
- UM/RSMAS Thesis Committee Member: (Silve Matt).
- UM/CIMAS Assistant Scientist Panel, 2002 (hired C. Meinen and R. Lumpkin), Chair.
- NOAA/AOML Hiring Panel: Oceanographer ZP III, 2002 (hired G. Goni), Chair.
- NOAA/AOML Hiring Panel: Oceanographer for Buoy Program, 2001, Member.
- NOAA/AOML Hiring Panel: Unix System Administrator, 2000 (hired J. McKeever), Member.
- NOAA/AOML Hiring Panel: Director of Computer Services Division, 1999 (hired R. Kohler), Member.
- UM/RSMAS Thesis Committee Member: Nanette Patton (1997-1998).
- NOAA Best Paper of the Year Award Panel 1996-1997.
- NOAA/AOML Best Paper of the Year Award Panel 1995-1996.

Refereed Publications

FY2014

Goni, G., J. Sprintall, D. Roemmich, A. Gronell Thresher, R. Couley, and M. Baringer, 2013: The global network of XBT temperature sections in support of Oceanographic and climate studies. Chapter 5: Oceans and Society: Blue Planet, ed. Samuel Djavidnie, Cambridge Scholars Publishing, in press.

Macdonald, A., and M. Baringer 2013. Observed Ocean Transport of Heat. Chapter 6.3 of "Ocean Circulation and Climate (Second edition)", ed. G. Siedler, J. Church, J. Gould and S. Griffies, Academic Press (Elsevier), in press.

Smeed, D. A., McCarthy, G. D., Cunningham, S. A., Frajka-Williams, E., Rayner, D., Johns, W. E., Meinen, C. S., Baringer, M. O., Moat, B. I., Ducheze, A., and Bryden, H. L., 2014. Observed decline of the Atlantic meridional overturning circulation 2004--2012, *Ocean Sci.*, 10, 29-38, doi:10.5194/os-10-29-2014, 2014.

Abraham, J.P., M. Baringer, N.L. Bindoff, T. Boyer, L.J. Cheng, J.A. Church, J.L. Conroy, C.M. Domingues, J.T. Fasullo, J. Gilson, G. Goni, S.A. Good, J. M. Gorman, V. Gouretski, M. Ishii, G.C. Johnson, S. Kizu, J.M. Lyman, A. M. Macdonald, W.J. Minkowycz, S.E. Moffitt, M.D. Palmer, A.R. Piola, F. Reseghetti, K. Schuckmann, K.E. Trenberth, I. Velicogna, J.K. Willis, A review of global ocean temperature observations: Implications for ocean heat content estimates and climate change, *Rev. Geophys.*, **51**, 450–483, doi: 10.1002/rog.20022.

Meinen, C. S., S. Speich, R. C. Perez, S. Dong, A. R. Piola, S. L. Garzoli, M. Baringer, S. Gladyshev, and E. Campos, 2013: Temporal variability of the meridional overturning circulation at 34.5°S: Results from two pilot boundary arrays in the South Atlantic. *J. Geophys. Res.*, 118, 1-18, doi:10.1002/2013JC009228.

FY2013

Baringer, M. O., W. E. Johns, G. McCarthy, J. Willis, S. Garzoli, M. Lankhorst, C. S. Meinen, U. Send, W. R. Hobbs, S. A. Cunningham, D. Rayner, D. A. Smeed, T. O.

- Kanzow, P. Heimback, E. Frajka-Williams, A. Macdonald, S. Dong, and J. Marotzke, 2013. Global oceans: Meridional overturning circulation and heat transport observations in the Atlantic, in State of the Climate in 2012, J. Blunden and D.S. Arndt (eds.), Bull. Am. Met. Soc., 94, S65-S68, 2013.
- Srokosz, M., M. Baringer, H. Bryden, S. Cunningham, T. Delworth, S. Lozier, J. Marotzke and R. Sutton, 2012. Past, present and future change in the Atlantic meridional overturning circulation. Bull. Am. Met. Soc., doi: 10.1175/BAMS-D-11-00151.1, Nov 2012.
- Meinen, C. S., W. E. Johns, S. L. Garzoli, E. van Sebille, D. Rayner, T. Kanzow, and M. O. Baringer, 2012. Variability of the Deep Western Boundary Current at 26.5°N during 2004-2009. Deep-Sea Res. II, 10.1016/j.dsr2.2012.07.036
- Garzoli, S.L., M.O. Baringer, S. Dong, R.C. Perez, and Q. Yao, 2012. South Atlantic meridional fluxes. Deep-Sea Res. II, doi:10.1016/j.dsr.2012.09.003, Nov, 2012.
- McCarthy, G., E. Frajka-Williams, W. E. Johns, M. O. Baringer, C. S. Meinen, H. L. Bryden, D. Rayner, A. Duche, C. Roberts, and S. A. Cunningham, 2012. Observed Interannual Variability of the Atlantic Meridional Overturning Circulation at 26.5°N. Geophysical Research Letters, 39, L19609, doi:10.1029/2012GL052933, 2012.

FY2012

- Baringer, M. O., S. A. Cunningham, C. S. Meinen, S. Garzoli, J. Willis, M. Lankhorst, A. Macdonald, U. Send, W. R. Hobbs, E. Frajka-Williams, T. O. Kanzow, D. Rayner, W. E. Johns, and J. Marotzke, 2012. [Global Oceans] Meridional Overturning Circulation and Heat Transport Observations in the Atlantic Ocean [in "State of the Climate in 2011"], Bull. Am. Met. Soc., 93 (7), S78-81.
- van Sebille, Erik, Molly O. Baringer, William E. Johns, Christopher S. Meinen, Lisa M. Beal, M. Femke de Jong, and Hendrik M. van Aken, 2011. Propagation pathways of classical Labrador Sea Water from its source region to 26deg N, Journal of Geophysical Research Oceans, 116, C12027, doi:10.1029/2011JC007171.

FY2011

- Dong, S., M. Baringer, G. Goni and S. Garzoli, 2011. Importance of the assimilation of Argo Float Measurements on the Meridional Overturning Circulation in the South Atlantic. Geophysical Research Letters, 38, L18603, doi:10.1029/2011GL048982. (Sep 17, 2011)
- Lee S.-K., W. Park, E. van Sebille, M. O. Baringer, C. Wang, D. B. Enfield, S. Yeager, and B. P. Kirtman, 2011. What Caused the Significant Increase in Atlantic Ocean Heat Content Since the mid-20th Century? Geophysical Research Letters, doi:10.1029/2011GL048856. (Sep 8, 2011)
- Dong, S. S. Garzoli and M. Baringer, 2011. The Role of inter-ocean exchanges on decadal variations of the northward heat transport in the South Atlantic, J. Phys. Oceano., 41(8):1498-1511.
- Lee, S.-K., D. B. Enfield, W. Park, E. van Sebille, C. Wang, S. Yeager, B. Kirtman, and M. O. Baringer, 2011: Secular and multidecadal warming of the Atlantic Ocean since the mid-20th century. *U.S. CLIVAR Variations*, 9 (2), 13-15.
- Baringer, M. O., T. O. Kanzow, C. S. Meinen, S. A. Cunningham, D. Rayner, W. E. Johns, H. L. Bryden, Eleanor Faika-Williams, J. J-M. Hirschi, M. P. Chidichimo, L. M. Beal and J. Marotzke, 2011. Meridional Overturning Circulation Observations in the Subtropical North Atlantic, in State of the Climate in 2010, Blunden, J., D. S.

- Arndt, M. O. Baringer (eds.), *Bull. Am. Met. Soc.*, 92, S95–S98. doi: 10.1175/1520-0477-92.6.S1
- Blunden, J., D. S. Arndt, M. O. Baringer, 2011: State of the Climate in 2010. *Bull. Amer. Meteor. Soc.*, 92, S1–S236. doi: 10.1175/1520-0477-92.6.S1
- Blunden, J., D. S. Arndt, M. O. Baringer, 2011: Abstract and Introduction, in State of the Climate in 2010. *Bull. Amer. Meteor. Soc.*, 92, S16–S19. doi: 10.1175/1520-0477-92.6.S1
- Johns, W. E., M. O. Baringer, L. M. Beal, S. A. Cunningham, T. Kanzow, H. L. Bryden, J. Hirschi, J. Marotzke, C. Meinen, B. Shaw, and R. Curry, 2011. Continuous, array-based estimates of Atlantic Ocean heat transport at 26.5 °N. *J. Clim.*, 24(10):2429–2449.
- Longworth, H. R., H. L. Bryden, M. O. Baringer, 2011. Historical Variability in Atlantic meridional baroclinic transport at 26.5°N from boundary dynamic height observations. *Deep-Sea Research Part II, Topical Studies in Oceanography*, Volume 58:1754-1767, ISSN 0967-0645, DOI: 10.1016/j.dsr2.2010.10.057.
- Rayner, D., J. J.-M. Hirschi, T. Kanzow, W. E. Johns, S. A. Cunningham, P. G. Wright, E. Frajka-Williams, H. L. Bryden, C. S. Meinen, M. O. Baringer, J. Marotzke and L. M. Beal, 2011. Monitoring the Atlantic Meridional Overturning Circulation, *Deep-Sea Res., Part II, Topical Studies in Oceanography*, Volume 58:1744-1753, ISSN 0967-0645, DOI: 10.1016/j.dsr2.2010.10.056.
- Kanzow, T., S.A. Cunningham, W.E. Johns, J. J-M. Hirschi, J. Marotzke, M. O. Baringer, C.S. Meinen, M. P. Chidichimo, C. Atkinson, L. M. Beal, H. L. Bryden, J. Collins, 2010. Seasonal variability of the Atlantic meridional overturning circulation at 26.5°N. *Journal of Climate*, 23, doi: 10.1175/2010JCLI3389.1171.

FY2010

- Arndt, D. S., M. O. Baringer, and M. R. Johnson, Eds., 2010: State of the Climate in 2009. *Bull. Amer. Meteor. Soc.*, 91 (7), S1-S224.
- Baringer, M. O., D. S. Arndt and M. R. Johnson, Eds., 2010: State of the Climate in 2009. *Bull. Amer. Meteor. Soc.*, 91 (7), S1-S224.
- Baringer, M. O., T. O. Kanzow, C. S. Meinen, S. A. Cunningham, D. Rayner, W. E. Johns, H. L. Bryden, J. J-M. Hirschi, L. M. Beal and J. Marotzke, 2010. The Meridional Overturning Circulation. in State of the Climate in 2009, D. S. Arndt, M. O. Baringer, and M. R. Johnson (eds.), *Bull. Am. Met. Soc.*, 91(6), 66-69.
- Meinen, C. S., M. O. Baringer, and R. F. Garcia, 2010. Florida Current Transport Variability: An Analysis of Annual and Longer-Periods, *Deep Sea Res. I*, 57 (7), doi:10.1016/j.dsr.2010.04.001, 835–846.
- Baringer, M. O., D. S. Arndt and M. R. Johnson, 2010: Abstract [in .State of the Climate in 2009.]. D. S. Arndt, M. O. Baringer, and M. R. Johnson (eds.), *Bull. Amer. Meteor. Soc.*, 91 (7), S12-S13.
- Baringer, M. O., D. S. Arndt, 2010: Introduction [in .State of the Climate in 2009.]. D. S. Arndt, M. O. Baringer, and M. R. Johnson (eds.), *Bull. Amer. Meteor. Soc.*, 91 (7), S14-S17.
- Cunningham, S., M. Baringer, W. Johns, J. Toole, S. Osterhaus, J. Fischer, A. Piola, E. McDonagh, S. Lozier, U. Send, T. Kanzow, J. Marotzke, M. Rhein, S. Garzoli, S. Rintoul, S. Speich, S. Wijffels, L. Talley, J. Baehr, C. Meinen, A-M. Treguier and P. Lherminier, 2010. The present and future system for measuring the Atlantic meridional overturning circulation and heat transport, In *OceanObs '09: Sustained*

Ocean Observations and Information for Society (Volume 2), J. Hall, D.E. Harrison, and D. Stammer (eds.). European Space Agency Publication, WPP-306, 16 pp. (2010).

Goni, G., D. Roemmich, R. Molinari, G. Meyers, T. Rossby, C. Sun, T. Boyer, M. Baringer, S. Garzoli, G. Vissa, S. Swart, R. Keeley, C. Maes, 2010. The Ship of Opportunity Program. In *OceanObs'09: Sustained Ocean Observations and Information for Society (Volume 2)*, J. Hall, D.E. Harrison, and D. Stammer (eds.). European Space Agency Publication, WPP-306, 19 pp. (2010).

Dong, S. Silvia L. Garzoli, and Molly Baringer, 2009. An Assessment of the Seasonal Mixed-Layer Salinity Budget in the Southern Ocean. *J. Geophys. Res.*, 114(C12):C12001, doi:10.1029/2008JC005258, Dec 1, 2009.

Dong, S. S. L. Garzoli, M. O. Baringer, C. S. Meinen, and G. J. Goni, 2009. Interannual variation in the Atlantic meridional overturning circulation and its relationship with the net northward heat transport in the South Atlantic. *Geophysical Research Letters*, 36(20):L20606, doi:10.1029/2009GL039356, Oct 23, 2009.

FY2009

Peterson, T. and M. Baringer, Eds., 2009. State of the Climate 2008, *Bull. Amer. Meteor. Soc.*, **90**, S1-S196.

Baringer, M. O., and T. Peterson, 2009. Abstract and Introduction, in State of the Climate in 2008, T. Peterson and M. Baringer (eds.), *Bulletin of the American Meteorological Society*, **90**, S12-S15.

Baringer, M. O., C. S. Meinen, G. C. Johnson, T. O. Kanzow, S. A. Cunningham, W. E. Johns, L. M. Beal, J. J.-M. Hirschi, D. Rayner, H. R. Longworth, H. L. Bryden, and J. Marotzke, 2009. The meridional overturning circulation, in State of the Climate in 2008, T. Peterson and M. Baringer (eds.), *Bulletin of the American Meteorological Society*, **90**, S59-S62.

DiNezio, P. N., L. J. Gramer, W. E. Johns, C. S. Meinen and M. O. Baringer, 2009. Observed interannual variability of the Florida Current: wind forcing and the North Atlantic Oscillation. *Journal of Physical Oceanography*, **39**, 3, pp. 721–736, DOI: 10.1175/2008JPO4001.1.

Meinen, C. S., D. S. Luther and M. O. Baringer, 2009. Structure, transport and potential vorticity of the Gulf Stream at 68°W: Revisiting older data sets with new techniques. *Deep Sea Research*, **56** (1), 41-60, doi:10.1016/j.dsr.2008.07.010.

FY2008

Baringer, M. O., and C. S. Meinen, 2008. The Meridional Overturning Circulation, in State of the Climate in 2007, D. H. Levinson and J. H. Lawrimore (eds.), *Bulletin of the American Meteorological Society*, **89**(7), s49-s51, doi:10.1175/BAMS-89-7-StateoftheClimate.

Johns, W. E., L. M. Beal, M. O. Baringer, J. R. Molina, S. A. Cunningham, T. Kanzow, and D. Rayner, 2008. Variability of shallow and deep western boundary currents off the Bahamas during 2004-2005: Results from the 26°N RAPID-MOC array. *Journal of Physical Oceanography*, **38**, 605-623 [DOI: 10.1175/2007JPO3791.1].

Kanzow, T., J. J-M. Hirschi, C. Meinen, D. Rayner, S. A. Cunningham, J. Marotzke, W. E. Johns, H. L. Bryden, L. Beal and M. O. Baringer, 2008. A prototype system for observing the Atlantic Meridional Overturning Circulation – scientific basis, measurement and risk mitigation strategies, and first results. *Journal of Operational Oceanography*, **1**, 1, 19-28.

FY2007

- Kanzow, T., S. A. Cunningham, D. Rayner, J. J-M. Hirschi, W.E. Johns, M. O. Baringer, H. L. Bryden, L. M. Beal, C. S. Meinen, J. Marotzke, 2007. Observed flow compensation associated with the meridional overturning circulation near 26.5°N in the Atlantic. *Science*, 17 August 2007 **317**: 938-941 [DOI: 10.1126/science.1141293].
- Cunningham, S. A., T. Kanzow, D. Rayner, M. O. Baringer, W. E. Johns, J. Marotzke, H. R. Longworth, E. M. Grant, J. J-M. Hirschi, L. M. Beal, C. S. Meinen and H. L. Bryden, 2007. Temporal Variability of the Atlantic Meridional Overturning Circulation at 26.5°N. *Science*, 17 August 2007 **312**: 335-938 [DOI: 10.1126/science.1141304].
- Baringer, M. O. and S. L. Garzoli, 2007. Meridional Heat Transport using Expendable Bathythermographs. Part I: Error Estimates from model and hydrographic data, *Deep Sea Research, (Part 1)*, DOI information doi:10.1016/j.dsr.2007.03.011
- Garzoli, S. L. and M. O. Baringer, 2007. Meridional Heat Transport using Expandable Bathythermographs Part II: South Atlantic Transport. *Deep Sea Research (Part 1)*, DOI information doi:10.1016/j.dsr.2007.04.013.
- Baringer, M. O. and C. S. Meinen, 2007. Thermohaline Circulation in Supplement to State of the Climate in 2006, A.Arguez, ed., *Bulletin of the American Meteorological Society*: Vol. 88, No. 6, pp. s1-s135, doi: 10.1175/BAMS-88-6-StateoftheClimate.
- Meinen, C. S., M. O. Baringer and S. L. Garzoli, 2006. Variability in Deep Western Boundary Current transports: Preliminary results from 26.5°N in the Atlantic, *Geophysical Research Letters*, 33, L17610, doi:10.1029/2006GL026965, 2006.

FY2006

- Baringer, M. O. and C. S. Meinen, 2006. Thermohaline Circulation in State of the Climate in 2005, K. A. Shein, ed., *Bulletin of the American Meteorological Society*: **87**, No. 6, pp. s1-s102, doi: 10.1175/BAMS-87-6-shein.
- Shein, K. A. (and long list of authors), 2005. State of the Climate in 2005, *Bulletin of the American Meteorological Society*: **87**, No. 6, pp. s6-s102, doi: 10.1175/BAMS-87-6-shein.
- Shoosmith, D. R., M. O. Baringer and W. E. Johns, 2005. A continuous record of Florida Current heat transport at 27°N, *Geophysical Research Letters*., **32**, L23603, doi:10.1029/2005GL024075.
- Mooers, Christopher N. K., Christopher S. Meinen, Molly O. Baringer, Inkweon Bang, Robert Rhodes, Charlie N. Barron, and Frank Bub, 2005. Florida Current Response to Cold Front Passages: Comparison of NOAA Cable and Navy Model Volume Transports, *EOS*, **86**(29), pgs 269, 272-273.
- Meinen, Christopher S., Silvia L. Garzoli, William E. Johns, and Molly O. Baringer, 2004. Transport Variability of the Deep Western Boundary Current and the Antilles Current off Abaco Island, Bahamas, *Deep Sea Research*, I, **51**(11), 1397-1415.
- Hansell, Dennis A., H. W. Ducklow, A. M. Macdonald and M. O. Baringer, 2004. Metabolic poise in the North Atlantic Ocean diagnosed from organic matter transports. *Limnology and Oceanography*, **49**, 1084-1094.
- Mayer, D. A., M. O. Baringer, and Gustavo J. Goni, 2003. Comparison of hydrographic and altimetric estimates of sea level height variability in the Atlantic Ocean. *Interhemispheric Water Exchange in the Atlantic Ocean*, Elsevier Oceanographic Series, G. Goni and P. Rizzoli, Eds., pp 23-48.

- Macdonald, A. M., M. O. Baringer, K. Lee, D. Wallace and R. Wanninkhof, 2003. A 1998-1992 comparison of inorganic carbon and its transport across 24.5°N in the Atlantic. *Deep Sea Research II*, **50**, 3041-3064.
- Goni, G. J. and M. O. Baringer, 2002. Ocean surface currents in the tropical Atlantic across high density XBT line AX08. *Geophysical Research Letters*, **29**, doi=101029/2002GL015873.
- Mayer, D. A., R. L. Molinari, M. O. Baringer, and G. J. Goni, 2001. Transition regions and their role in the relationship between sea surface height and subsurface temperature structure in the Atlantic Ocean. *Geophysical Research Letters*, **28**, 20, 3943-3946.
- Baringer, M. O. and J. Larsen, 2001 Sixteen Years of Florida Current Transport at 27N. *Geophysical Research Letters*, **28**, 16, 3179-3182.
- Macdonald, A. M., M. O. Baringer and A. Ganachaud, 2001. Heat Transport and Climate. *Encyclopedia of Ocean Sciences*, J H Steele, S A Thorpe and K K Turekian (eds), London, UK, Academic Press, **2**, 1195-1206.
- Baringer, M. O'Neil, and R. Molinari 1999. Atlantic Ocean baroclinic heat flux at 24 to 26N. *Geophysical Research Letters*, **26**, 3, 353-356.
- Baringer, M. O'Neil and J. F. Price, 1999. A Review of the Physical Oceanography of the Mediterranean Outflow. *Marine Geology*, **155**, 1-2, 63-82.
- Talley, L. D. and M. O. Baringer, 1997. Preliminary results from WHP sections I8N/I5E in the Central Indian Ocean. *Geophysical Research Letters*, **24**, 21, 2789-2792.
- McCarthy, M. C., Lynne D. Talley and Molly Baringer, 1997. Deep Upwelling and Diffusivity in the Southern Central Indian Basin. *Geophysical Research Letters*, **24**, 21, 2801-2804.
- Gordon, A. L., Shubin Ma, Donald B. Olson, Peter Hacker, Amy Ffield, Lynne D. Talley, Douglas Wilson and Molly Baringer, 1997. Advection and Diffusion of Indonesian Throughflow within the Indian Ocean South Equatorial Current. *Geophysical Research Letters*, **24**, 21, 2573-2576.
- Baringer, M. O'Neil and J. F. Price, 1997. Mixing and spreading of the Mediterranean outflow. *Journal of Physical Oceanography*, **27**, 8, 1654-1677.
- Baringer, M. O'Neil and J. F. Price, 1997. Momentum and energy balance of the Mediterranean outflow. *Journal of Physical Oceanography*, **27**, 8, 1678-1692.
- Price, J.F. and M.O. Baringer, 1994. Overflows and deep water production by marginal seas. *Progress in Oceanography*, **33**, 161-200.
- Johnson, G.C., T.B. Sanford, and M. O'Neil Baringer, 1994. Stress on the Mediterranean Outflow Plume: Part 1. Velocity and Water Property Measurements. *Journal of Physical Oceanography*, **24**, 2072-2083.
- Baringer, Molly O'Neil, 1994. Mixing and Dynamics of the Mediterranean Outflow. PhD Thesis, Mass. Inst. of Technol./Woods Hole Oceanogr. Inst. Joint Program, Cambridge, Mass., WHOI-93-52, 244 pp.
- Price, J.F, M. O'Neil Baringer, R.G. Lueck, G.C. Johnson, I.Ambar, G.Parrilla, A. Cantos, M.A. Kennelly, and T.B. Sanford, 1993. The Mediterranean Outflow Mixing and Dynamics. *Science*, **259**, 1277-1282.
- Baringer, M. O. and J. F. Price, 1990. A simple model of the descending Mediterranean outflow plume. *NATO Advanced Research Institute on the Physical Oceanography of Sea Straits*, Kluwer Academic Publishers, ed. L. J. Pratt, pp. 298-308.

Non-Refereed Publications

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Published Technical Reports

- Hooper, J.A., and M.O. Baringer. Hydrographic measurements collected aboard the NOAA Ship Ronald H. Brown, 15 February-5 March 2012: Western boundary time series cruise RB-12-01 (AB1202). NOAA Data Report, OAR-AOML-43, 267 pp., 2013
- Rayner, D. and M. Baringer, 2012. RV Ronald H. Brown Cruise RB1201, 15 Feb – 05 Mar 2012. RAPID moorings cruise report. Southampton, UK: National Oceanography Centre, Southampton, 90pp. (National Oceanography Centre Cruise Report, No. 19).
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- Fleurant, C. I., M. O. Baringer, R. H. Smith, W. D. Wilson and R. L. Molinari, 1999. CTD, ADCP, XBT, PALACE float measurements collected on an Atlantic Circulation and Climate Experiment (ACCE) cruise along 6°N, 6°S, and the equator during June–August 1997. *NOAA Technical Report*.
- McTaggart, K. E., G. C. Johnson, C. I. Fleurant and M. O. Baringer, 1999. CTD/O2 Measurements collected on a Climate and Global Change Cruise along 24°N in the Atlantic Ocean (WOCE Section A6) During January–February 1998. *NOAA Technical Report PMEL-68*, Pacific Marine Environmental Laboratory, Seattle Washington, 358 pp.

Current Funded Proposals

- NOAA/CPO - Western Boundary Time Series in the Atlantic Ocean, M. Baringer, C. Meinen, and S. Garzoli, yearly renewable, \$349K/FY2008-13, \$335K/FY2007, \$332K/FY2006, \$254K 2005.
- NSF - An Observing System for Meridional Heat Transport Variability in the Subtropical North Atlantic, W. E. Johns, M. Baringer, L. Beal and C. Meinen, \$3944K Total FY2008-2014.
- NOAA/CPO: Ship of Opportunity Program (SOOP): Volunteer Observing Ships: Expendable Bathythermograph and Environmental Data Acquisition Program, G. Goni, M. Baringer and S. Garzoli, \$1219K/FY2012-13, \$1289K/FY2011, \$1385K/FY2010, \$1325K/FY2009.
- NOAA/CPO - Meridional Heat Transport from Atlantic Ocean High Density XBT Lines, M. Baringer, S. Garzoli, and G. Goni, renewable, \$79.2K/FY2012-13, \$88K/FY2008-11.
- NOAA/CPO - South Atlantic Meridional Overturning Circulation Project, Christopher S. Meinen, Silvia L. Garzoli, and Molly O. Baringer, FY2010-13 \$81K, FY2009 \$81K, FY2008 \$40K.
- NOAA/CPO –CLIVAR Repeat Hydrography, with J. Swift, R. Feely, R. Wanninkhof, G. Johnson, C. Langdon, and many others, renewable, \$300K/FY2010-13, \$304K/FY2007-2009, \$302K/FY2006, \$302K/FY2005, various amounts \$ 2002-2004.

Funded Proposal History

- NOAA-OAR-CPO-2010-2001720 - Dong, S. G. Goni, M. Baringer and G. Halliwell, Assessing the Sensitivity of Northward Heat Transport/Atlantic Meridional Circulation to Forcing in Existing Numerical Model Simulations. June 2010-May 2013 (\$82K, \$84K, \$88K).
- NOAA/PRFA - Monitoring and Assessing Implications of the Deepwater Horizon Oil Spill: Potential Impacts of the Loop Current on Downstream Marine Ecosystems in the Gulf of Mexico and Florida Straits. G. Goni, M. Wood, M. Baringer, R. Smith, C. Kelble, R. Lumpkin, L. Johns, S. Cummings, J. Lamkin, \$1,767674 FY10-11 (\$858.7K AOML portion).

- NOAA/PRFA - Upper Ocean sampling of currents and salinity in the Loop Current to monitor the Deepwater Horizon Oil Spill: AOML Support. F. Marks, N. Shay and M. Baringer \$34,350 FY10.
- NOAA/PRFA - Upper Ocean sampling of currents and salinity in the Loop Current to monitor the Deepwater Horizon Oil Spill: CIMAS Support. F. Marks, N. Shay and M. Baringer \$45,000 FY10.
- NOAA/CPO –Western Boundary Time Series Add Task: Equipment Support, with C. Meinen, and S. Garzoli, renewable, \$150K/FY2009.
- NOAA/CPO: CO₂ and Hydrographic Measurements During the GasEx-III Experiment, R. Feely, R. Wanninkhof, C. Sabine, M. Baringer and G. Johnson, \$110K Total PHOD 2007-2009.
- NOAA/CPO: Ship of Opportunity Program (SOOP): Volunteer Observing Ships: Expendable Bathythermograph and Environmental Data Acquisition Program, M. Baringer, G. Goni and S. Garzoli, \$1289K/FY2008, \$1269K/FY2007.
- NOAA/OGP – High Density XBT Observations for Atlantic Climate Variability Studies - M. Baringer, G. Goni and S. Garzoli \$802K/FY2006, \$537K FY2005, \$465K FY 2004.
- NSF - An Observing System for Meridional Heat Transport Variability in the Subtropical North Atlantic, W. E. Johns, M. Baringer and L. Beal, \$2143K Total FY2003-2008.
- NOAA/OGP - Tropical Subtropical Interactions, S. Garzoli, C. Schmid, G. Goni and M. Baringer. \$100K FY2003.
- NOAA/OGP - Implementation of the Tropical High Density XBT Line AX8 in the Tropical Atlantic - Gustavo Goni, M. Baringer, and S. Garzoli \$140/yr FY2002-2003.
- NOAA - Subtropical Atlantic Western Boundary Current Monitoring – M. Baringer, E. Johns, W. D. Wilson and A. Flossadottir, - \$196K 2004, \$161K FY2003, \$113K FY2002, \$52K FY2001.
- NOAA/OGP - Implementation of the Tropical High Density XBT Line AX8 with TSG and IMET Instrumentation in the Tropical Atlantic - Gustavo Goni, M. Baringer, Robert Weller and David Hosum \$120K FY2001.
- NOAA/OGP - Sustained XBT Observations for North Atlantic Climate Variability Studies – M. Baringer - \$180K/yr FY2000-2004.
- NOAA/OAR - Monitoring Florida Current Transport and the Atlantic Meridional Overturning Circulation - W. D. Wilson, M. Baringer and A. Flosadottir - \$80K/FY2000.
- NOAA/OGP/OACES - Carbon Fluxes in the Atlantic Ocean – R. Wanninkhof, M. Baringer and D. Wallace -\$60K/FY2001, \$110K/FY2000, \$110K/FY1999 (AOML portions).
- NOAA/OGP - Sustained observations for North Atlantic Climate variability – M. Baringer \$110K/FY1999.
- NOAA - Atlantic Ocean Hydrographic Survey across 24°N – M. Baringer and G. Johnson \$110K/FY1999, \$220K/FY1998 - (AOML portion).
- NOAA/OGP/ACCE - XBT/VOS surveys of the North Atlantic – M. Baringer - \$110K/1998.
- NOAA/OGP - WOCE Indian Ocean Analysis - R. Molinari, D. Wilson and M. Baringer- \$45K/1997.

- NOAA/OGP - XBT/Upper Ocean thermal Center - R. Molinari, W. Woodward and M. Baringer- \$220K/yr FY1995-1996.

Hydrographic Programs

- R/V RONALD H. BROWN, Feb-Mar ,2013, Western Boundary Time Series Cruise, San Juan, Puerto Rico to Charleston, SC, Chief Scientist (CTD/Salts/O2, discrete O2).
- R/V RONALD H. BROWN, Feb-Mar ,2012, Western Boundary Time Series Cruise, Charleston, SC to Charleston, SC, Chief Scientist (CTD/Salts/O2, discrete O2).
- R/V RONALD H. BROWN, Aug-Nov ,2011, Clivar CO2/Repeat Hydrography Cruise, Cape Town, SA to Rio, Brazil, Chief Scientist (CTD/Salts/O2, discrete O2).
- R/V RONALD H. BROWN, Nov-Dec ,2010, Western Boundary Time Series/NTAS/MOVE Cruise, Charleston, SC to Charleston, SC, Co-Chief Scientist (CTD/Salts/O2).
- R/V RONALD H. BROWN, Mar 2007, Gas Exchange III Program, SanDiego, CA to Punta Arenas, Chile, , July 10 – August 4, 2007, Co-PI (CTD/Salts/O2).
- R/V RONALD H. BROWN, Mar 2007, P18: Clivar Repeat Hydrography/CO2 Program, San Diego, CA to Punta Arenas, Chile, December 15 – February 23, 2008, Co-PI (CTD/Salts/O2, discrete O2).
- R/V WALTON SMITH FY 2007: Dec 13-14 2006, Jun 28-29, 2007, Oct 4-5, 2007; Western Boundary Time Series Cruise, PI.
- R/V RONALD H. BROWN, Mar 2007, North Atlantic Carbon Program Coastal CO2 Program, Galveston, TX to Boston, MA, July 10 – August 4, 2007, Co-PI (CTD/O2, discrete O2).
- R/V Wecoma, May 11- 14 June, 2007, North Atlantic Carbon Program West Coast Coastal CO2 Cruise, Newport, OR to San Diego, CA, Co-PI (discrete O2).
- R/V RONALD H. BROWN, Mar 2007, Western Boundary Time Series Cruise, Charleston to Puerto Rico, Chief Scientist, PI, *Chief Scientist*.
- R/V WALTON SMITH FY 2006: Nov 20-23 2005, Dec 14-16, 2005, Jan 29-31, 2006; Jun 25-27 2006, Sep 18-10 2006. Western Boundary Time Series Cruise, PI.
- R/V RONALD H. BROWN, Mar 2006, Western Boundary Time Series Cruise, Barbados to Charleston, PI, *Chief Scientist*.
- R/V THOMPSON, Feb-Mar 2006, Repeat Hydrography Cruise: P16N, Papeete, Tahiti to Kodiak, Alaska, Co-PI (CTD/Salts/O2).
- R/V WALTON SMITH FY 2005: Dec 3-4 2004 (*Chief Scientist*), Jun 3-4, 2005, Jul 11-12, 2005; Western Boundary Time Series Cruise, PI.
- R/V RONALD H. BROWN, Sep 2005, Western Boundary Time Series Cruise, Charleston to Miami, PI.
- R/V KNORR, May 2005, MOCHA/RAPID Climate Change Cruise, Bermuda to Miami, Co-PI (CTD/Salts/O2, discrete O2).
- R/V RONALD H. BROWN, Jan-Feb 2005, Repeat Hydrography Cruise: A16S, Punta Arenas, Chile to Fortaleza, Brazil, Co-PI (CTD/Salts/O2).
- R/V WALTON SMITH FY 2004: Jan 8-9, 2003, May 6-7, 2004, Jul 4-5, 2004; Aug 27-28, 2004, Western Boundary Time Series Cruise, PI.
- R/V RONALD H. BROWN, Sep 2004, Western Boundary Time Series Cruise, Charleston to Miami, PI.

- R/V RONALD H. BROWN, Jun-Aug 2003, Repeat Hydrography Cruise: A16N, Reykjavik, Iceland to Natal, Brazil, Co-PI (CTD/Salts/O2).
- R/V RONALD H. BROWN, Feb 2003, Western Boundary Time Series Cruise, Charleston to Miami, PI.
- R/V WALTON SMITH FY 2003: Nov 20, 2002, Mar 22, 2003, Jul 16, 2003, Oct 2-3 2003, Western Boundary Time Series Cruise, PI.
- R/V RONALD H. BROWN, June 2002, Western Boundary Time Series Cruise, Jacksonville to Miami, PI.
- R/V OCEANUS, April-May 2001, Florida Straits, Northwest Providence Channel and Abaco Island Deep Western Boundary Time Series cruise, Miami to Miami, PI, Chief Scientist.
- R/V RONALD BROWN, January-February 1998, OACES carbon, heat and fresh water flux cruise along 24°N in the Atlantic Ocean, Canary Islands to Miami, PI.
- R/V SEWARD JOHNSON, June-July 1997, ACCE Float deployment cruise along 6°N and the equator in the Atlantic Ocean, Port-of-Spain to Fortaleza, *Chief Scientist*.
- R/V KNORR, March-April 1995, WOCE I8I5E along 80°E in the Indian Ocean, Sri Lanka to Freemantle, Co-Chief Scientist.
- R/V KNORR, June-July 1992, WOCE P6 along 32°S in the South Pacific Ocean, Easter Island to Aukland., CTD watch stander.
- R/V OCEANUS, September 1988, Gulf of Cadiz Expedition, Cadiz to Cadiz. Cruise related to PhD Thesis, CTD watch stander.

Collaborating Scientists Over Last 48 Months

A. Macdonald, F. R. Reseghetti, J.P. Abraham, W. E. Johns, G. McCarthy, J. Willis, M. Lankhorst, S. Garzoli, M. Lankhorst, C. Meinen, U. Send, W. R. Hobbs, S. A. Cunningham, D. Rayner, D. A. Snead, T. O. Kanzow, P. Heimbach, E. Frajka-Williams, S. Dong, J. Marotzke, M. Srokosz, H. Bryden, T. Delworth, S. Lozier, R. Sutton, E. van Sebille, R.C. Perez, Q. Yao, A. Ducheze, C. Roberts, L. M. Beal, G. Goni, S.-K. Lee, W. Park, C. Wang, D.B. Enfield, S. Yeager, B.P. Kirtman, M. P. Chidichimo, J. Blunden, D. S. Arndt, J. Hirschi, B. Shaw, R. Curry, H. R. Longworth, P.G. Wright, C. Atkinson, J. Collins, R. F. Garcia, J. Toole, S. Osterhaus, J. Fischer, A. Piola, E. McDonaghah, M. Rhein, S. Rintoul, S. Speich, S. Wijffels, L. Talley, J. Baehr, A-M. Treguier and P. Lhernminier, R. Molinari, G. Meyers, T. Rossby, C. Sun, T. Boyer, G. Vissa, S. Swart, R. Keeley, C. Maes, T. Peterson, P. N. DiNezio, L. J. Gramer, D. S. Luther

Miscellaneous

- Baringer PhD Thesis advisor: James Price, WHOI
- Baringer Thesis committee: James Price, Paola Rizzoli, Harry Bryden, Micheal McCartney, David Chapman, Glen Gawarkiewicz
- Baringer Thesis Defense Chairman: Jack Whitehead

Workshop/Meeting Organizer

- The First XBT Science Meeting, Melbourne, Australia, July 7-9, 2011.
- Clivar Atlantic Meridional Overturning Circulation, Annapolis, Md, May 4-6, 2009
- XBT fall rate workshop, Miami, March 10-12, 2008.
- AGU 2005 Fall Meeting, San Francisco, Ca, Dec 5-9 2005.

- AGU 2004 Fall Meeting, San Francisco, Ca, Dec 13-17 2004.
- AGU 2003 Fall Meeting, San Francisco, Ca, Dec 8-12 2003.
- AGU 2002 Fall Meeting, San Francisco, Ca, Dec 6-10 2002.
- WOCE/JGOFS Ocean Transport Workshop, Southampton Oceanography Centre, Southampton, UK. 25-29 June 2001.

Leadership Training

- 2012-2013 NOAA Leadership Competencies Development Program Peer Advisor
- 2010-2011 NOAA Leadership Competencies Development Program Peer Advisor
- 2008-2009 NOAA Leadership Competencies Development Program
- 2008 NOAA Leadership Seminar (Airlie House, VA)
- 2007 Building Leaders for A Solid Tomorrow (BLAST), NOAA NWS Program

Project Web Sites

- High Density XBT Program:
www.aoml.noaa.gov/phod/hdenxbt/high_density_home.html
- Meridional Heat transport quarterly reports:
www.aoml.noaa.gov/phod/soto/mht/index.php
- Western Boundary Time Series program:
www.aoml.noaa.gov/phod/wbts/index.php

Selected Abstracts

FY2012

Baringer, M, 2012. Meridional overturning and heat transport from expendable bathythermograph data (2012 AMOC Annual PI Meeting, August 15-17, 2012).

Goni, G., Shenu Dong, Molly Baringer, Silvia Garzoli, Francis Bringas, 2012. Variability of the MOC in the South Atlantic since 1993. (2012 AMOC Annual PI Meeting, August 15-17, 2012).

Garzoli, S., Molly O. Baringer, Shenu Dong, Renellys C. Perez and Qi Yao, 2012. South Atlantic Meridional Fluxes. (2012 AMOC Annual PI Meeting, August 15-17, 2012).

Dong, S., Molly Baringer, Gustavo Goni, and Silvia Garzoli, 2012. Causes for model-data differences in seasonal variations of the South Atlantic Meridional Overturning Circulation. (2012 AMOC Annual PI Meeting, August 15-17, 2012).

Johns, W., Stuart Cunningham, Molly Baringer, Eleanor Frajka-Williams, Harry Bryden and Jian Zhao, 2012. Interannual Variability of the AMOC and Ocean Heat Transport at 26.5°N observed by the RAPID-MOCHA Array. (2012 AMOC Annual PI Meeting, August 15-17, 2012).

Wanninkov, R., M. Baringer, J. Bulister, A. Dickson, R. Feely, G. Johnson, C. Langdon, F. Millero, C. Mordy, C. Sabine, J-K. Zhong, 2011. Observations for Climate: The NOAA component of the CLIVAR CO₂/Tracer Repeat Hydrography Program. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)

Baringer, M., S. Dong, S. Garzoli, G. Goni, S-k. Lee, R. Lumpkin, C. Meinen, R. Perez, 2011. Sustained Observations that contribute to understanding the Meridional

- Overturning Circulation. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Dong, S., M. Baringer, S. Garzoli, G. Goni, 2012. Observations for Climate: The contribution of the XBT network to climate studies. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Lumpkin, R., M. Baringer, S. Garzoli, G. Goni, C. Schmid, 2011. Observations for Climate: Evaluating the Global Ocean Observing System. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Szuts, Z., M. Baringer and C. Meinen, 2011. Atlantic Meridional Overturning Circulation: Salinity and water mass transports in the Florida Straits. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Johns, W., M. Baring, L. Beal, H. Bryden, S. Cunningham, R. Curry, J. Hirschi, T. Kanzow, J. Marotzke, C. Meinen, 2011. Atlantic Meridional Overturning Circulation: New estimates of Atlantic Ocean Heat Transport at 26.5°N from the RAPID-MOCHA Array. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Van Sebille, E., M. Baringer, L. Beal, F. de Jong, W. Johns, C. Meinen, H. van Aken, 2011. Atlantic meridional overturning circulation: Propagation pathways of classical Labrador Sea Water from its source region to 26N. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)
- Frajka-Williams, E., M. Baringer, H. Bryden, S. Cunningham, J. Hirschi, W. Johns, C. Meinen, D. Rayner, 2011. Atlantic Meridional Overturning Circulation: Towards a decade-long time series of observations at RAPID-MOCHA 26N. (2011 World Climate Research Program Open Science Conference, October 24-28, Denver, Colorado.)

FY2011

- Erik van Sebille¹, William Johns, Molly Baringer, Christopher Meinen, Lisa Beal, M. Femke de Jong, Hendrik van Aken, 2011. Propagation pathways of classical Labrador Sea Water from its source region to 26°N. (Rapid Annual Meeting, July, United Kingdom.)
- Atkinson, C. M. Baringer, L. Beal, H. Bryden, M-P. Chidichimo, J. Collins, S. Cunningham, J. Hirschi, W. Johns, H. Johnson, T. Kanzow, J. Marotzke, D. Marshall, C. Meinen, A. Mujahid, D. Rayner, Z. Szuts, E. Frajka-Williams, 2011. Meridional overturning circulation and heat flux array at 26.5°N: Variability observed at periods of minutes to years during the period from April 2004 to April 2009. (Rapid Annual Meeting, July, United Kingdom.)

FY2010

- Meinen, C. S., S. L. Garzoli, M. O. Baringer, S. A. Cunningham, D. Rayner, and W. E. Johns, Variability of the Antilles and Deep Western Boundary Currents at 26.5°N, 2010. (RAPID Annual Meeting, July 14-16, Exeter, United Kingdom.)
- Frajka-Williams, E., S. Cunningham, J. Hirschi, H. Bryden, W. Johns, C. Meinen, and M. Baringer, The RAPID-MOC/MOCHA array: Observing the Antarctic Bottom Water abyssal cell of the Atlantic Meridional Overturning Circulation at 26.5°N, 2010. (RAPID Annual Meeting, July 14-16, Exeter, United Kingdom.)
- Dong, S., S. L. Garzoli and M. O. Baringer, The role of Inter-ocean exchanges on Long-Term Variability in the Northward Heat Transport in the South Atlantic, (US AMOC

2010 Meeting, Miami).

Meinen, C. S., S. L. Garzoli, A. R. Piola, M. O. Baringer, E. J. Campos, and S. Speich, Variability of the Western Boundary Components of the Meridional Overturning Circulation in the South Atlantic, 2010 (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

Baringer, M., W. E. Johns, L. M. Beal, T. Kanzow, H. L. Bryden, S. A. Cunningham, J. Hirschi, J. Marotzke, C. S. Meinen, R. Curry, Continuous, Array-based Estimates of Atlantic Ocean Heat Transport at 26.5°N, 2010 (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

Kanzow, T., W. Johns, J. Marotzke, J. Hirschi, H. L. Bryden, M. O. Baringer, C. Maria Paz, H. L. Johnson, D. P. Marshall, C. S. Meinen, L. M. Beal, and S. A. Cunningham, Continuous Observations of the Variability of the Atlantic Meridional Overturning Circulation and Present Challenges, 2010 (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

Cunningham, S. A., W. E. Johns, J. Hirschi, M. O. Baringer, C. S. Meinen, C. Maria Paz, L. M. Beal, H. L. Bryden, J. Marotzke, H. L. Johnson, D. P. Marshall, and T. Kanzow, The Atlantic Meridional Overturning Circulation and Heat Flux at 26.5°N: Results from the first four years of the RAPID-WATCH/MOCHA Array, 2010 (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

Casal, T.G., M. O. Baringer, S. Dong and M. S. McCartney, Decadal variability of Subantarctic Mode Water and Antarctic Intermediate Water in the southern Pacific Ocean, (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

Dong, S., S. L. Garzoli and M. O. Baringer, Time-mean and Seasonal Variations in the Inter-Ocean Exchanges in the South Atlantic, (2010 Ocean Sciences Meeting, February 22-26, Portland, Oregon.)

FY2009

Meinen, C. S., S. L. Garzoli, M. O. Baringer, and R. F. Garcia, "Variability of the Antilles Current and Deep Western Boundary Current from four years of PIES and CPIES data at 26.5°N", 2009. (RAPID Annual Meeting, July 7-9, Edinburgh, United Kingdom.)

Cunningham, S., T. Kanzow, J. Hirschi, B. Johns, M. Baringer, C. Meinen, M.P. Chidichimo, C. Atkinson, and J. Collins, "Sub-seasonal to seasonal variability of the Atlantic Meridional Overturning Circulation at 26.5N", 2009. (RAPID Annual Meeting, July 7-9, Edinburgh, United Kingdom.)

Johns, W., L. Beal, M. Baringer, T. Kanzow, H. Bryden, S. Cunningham, J. Hirschi, J. Marotzke, C. Meinen, and R. Curry, "Atlantic Ocean Heat "Transport at 26.5°N from the RAPID-MOCHA Array", 2009. (RAPID Annual Meeting, July 7-9, Edinburgh, United Kingdom.)

Rayner, D., S. A. Cunningham, H. L. Bryden, W. E. Johns, L. M. Beal, M. O. Baringer, and C. S. Meinen, "Status of the RAPID 26.5N Atlantic Meridional overturning array", 2009. (RAPID Annual Meeting, July 7-9, Edinburgh, United Kingdom.)

S. Cunningham, T. Kanzow, W. Johns, J. Hirschi, M. Baringer, C. Meinen, D. Rayner, M.-P. Chidichimo, L. Beal, H. Bryden, J. Collins, and J. Marotzke, "Sub-seasonal to seasonal variability of the Atlantic Meridional Overturning Circulation at 26.5 N", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)

- S. Dong, S. Garzoli, M. Baringer, C. Meinen, and G. Goni, "The Atlantic Meridional Overturning Circulation and its Northward Heat Transport in the South Atlantic", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)
- Meinen, C. S., C. Schmid, G. Goni, M. O. Baringer, R. Lumpkin, and S. L. Garzoli, "Contributions of the Global Ocean Observing System - What is the observing system telling us about the ocean and how is it helping to improve assimilating models", 2009. (oral presentation by M. Baringer, 2009 AMS Annual Meeting, January 11-16, Phoenix, Arizona.)
- Baringer M., "The relationship between heat transport, heat content and net surface heat fluxes in the Atlantic Ocean", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)
- Garraffo, Z., S. Garzoli, S. Dong, and M. Baringer, "South Atlantic pathways from a high resolution global model", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)
- Garzoli S., S. Dong, M. Baringer and Z. Garraffo, "AMOC variability and connectivity in the South Atlantic", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)
- Munoz, E., S. Garzoli and M. Baringer, "Varied representation of the South Atlantic MOC across ocean reanalysis", 2009. (First U.S. Atlantic Meridional Overturning Circulation Annual Meeting, May 4-6, Annapolis, Maryland.)
- FY2008**
- Baringer, M., W. Johns, C. Meinen, D. Shoosmith, and H. Bryden, "On the Structure of Florida Current Variability", 2008. (RAPID Annual Meeting, June 30-July 2, Cambridge, United Kingdom.)
- Meinen, C. S., M. O. Baringer, and R. F. Garcia, "Florida Current Transport Variability: An Analysis of Annual and Longer-Period Signals", 2008. (RAPID Annual Meeting, June 30-July 2, Cambridge, United Kingdom.)
- Johns, W., H. Bryden, M. Baringer, L. Beal, S. Cunningham, T. Kanzow, J. Hirschi, J. Marotzke, Z. Garraffo, C. Meinen, and R. Curry, "Observations of Meridional Heat Transport Variability from the 26.5°N RAPID-MOC Array", 2008. (RAPID Annual Meeting, June 30-July 2, Cambridge, United Kingdom.)
- Kanzow, T., S. A. Cunningham, D. Rayner, M. O. Baringer, W. E. Johns, J. J.-M. Hirschi, L. M. Beal, C. Meinen, H. L. Bryden, "Observations of the temporal variability of the Atlantic meridional overturning circulation from the Rapid-MOC transatlantic array at 26.5°N", 2008. (RAPID Annual Meeting, June 30-July 2, Cambridge, United Kingdom.)
- Baringer, M. Heat transport changes from High-Density XBT lines in the North Atlantic. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)
- Meinen, C. S., M. O. Baringer, and R. F. Garcia, 2008. Variations of the Florida Current transport from 1964 to 2007 and the relationship to forcing, 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)
- Garcia, R. F., C. S. Meinen, M. O. Baringer, "Utilizing Voltage Measurements on a Submarine Cable to Estimate Florida Current Transport Operationally: A Real-Time Observing System, 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)

- Fonseca, C. A., M. O. Baringer, C. S. Meinen, "Water Mass Changes in the Deep Western Boundary Current Along 26.5°N", 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)
- Cunningham, S. A., T. Kanzow, D. Rayner, M. O. Baringer, W. E. Johns, J. Hirschi, L. M. Beal, C. S. Meinen, H. L. Bryden, J. Marotzke, "Observations of the Temporal Variability of the Atlantic Meridional Overturning Circulation", 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)
- Johns, W. E., H. L. Bryden, M. O. Baringer, L. M. Beal, S. A. Cunningham, T. Kanzow, J. Hirschi, J. Marotzke, Z. Garraffo, C. S. Meinen, "Observations of Atlantic Meridional Heat Transport Variability at 26.5°N from the RAPID-MOC Array, 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)
- Bryden, H. L., S. A. Cunningham, T. Kanzow, D. Rayner, M. O. Baringer, W. E. Johns, J. Marotzke, J. Hirschi, L. M. Beal, C. S. Meinen, "An Operational Array for Monitoring the Atlantic Meridional Overturning Circulation at 26°N", 2008. (2008 Ocean Sciences Meeting, March 2-7, Orlando, Florida.)

FY2007

- Baringer, M. and S. L. Garzoli, 2007. The Meridional Heat Transport in the South Atlantic Ocean AGU Joint Assembly, Acapulco (Mexico), 22-25 May 2007.
- Johns, W; S. Cunningham, T. Kanzow, H. Bryden, J Marotzke, M. Baringer, L. Beal; C. Meinen, J. Hirschi, D. Rayner, 2007. Variability of the Atlantic meridional overturning circulation during 2004-2005 as observed from the 26° N RAPID- MOC Array. AGU Joint Assembly, Acapulco (Mexico), 22-25 May 2007.
- Meinen, C. S., D. S. Luther, and M. O. Baringer, Evolution of the Gulf Stream structure, transport, and vertical coherence from the Straits of Florida to the Southeast Newfoundland Ridge, 2007. (EGU General Assembly, April 15-20, Vienna, Austria.)
- Kanzow, T.; Cunningham, S.; Rayner, D.; Hirschi, J.; Johns, W.E.; Baringer, M.; Bryden, H.; Beal, L.; Meinen, C.; Marotzke, J., 2007. Flow compensation associated with the meridional overturning circulation. EGU General Assembly 2007, EGU2007-A-07119.
- Baringer, M. O., 2006. Heat transport variations in the subtropical North Atlantic, Rapid Climate Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.
- Meinen, C. S., M. O. Baringer, and S. L. Garzoli, 2006. Variability of the Western Boundary Currents in the subtropical North Atlantic, Rapid Climate Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.
- Longworth H. R., H. L. Bryden, M. O. Baringer: 2006. Variability in the Atlantic Meridional Overturning Circulation at 25°N from 1980 to 2005. Rapid Climate Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.
- Kanzow T., S., S. Cunningham, H. Bryden, J. Hirschi, D. Rayner, J. Marotzke, W. Johns, M. Baringer, C. Meinen. 2006. Vertical compensation of mass transports associated with the meridional overturning circulation in the Subtropical North Atlantic. Rapid Climate Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.
- Bryden, H. L., T. Kanzow, H. R. Longworth, S. A. Cunningham, M. O. Baringer, L. M. Beal, J. J.- M Hirschi, W. E. Johns, C. S. Meinen, J. Marotzke, D. Rayner, 2006: Variability in the Atlantic meridional overturning circulation at 25°N. Rapid Climate

Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.

Rayner D., S. Cunningham, H Bryden, T. Kanzow, J. Hirschi, J. Marotzke, W. Johns, M. Baringer, C. Meinen, L. Beal, 2006. Evolution and maintenance of the transatlantic mooring array at 26.5°N, Rapid Climate Change International Conference, October 24-27, 2006, Birmingham, United Kingdom.

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Hirschi, J; Kanzow, T; Rayner, D; Cunningham, S; Bryden, H; Marotzke, J; Johns, W; Baringer, M; Meinen, C; Beal, L., 2006. Design Aspects of Monitoring the Meridional Overturning Circulation in the Subtropical North Atlantic. EOS, Transactions, American Geophysical Union [EOS Trans. Am. Geophys. Union]. Vol. 87, no. 36, suppl., [np]. suppl., Sep 2006.

Kanzow, T; Cunningham, S; Bryden, H; Rayner, D; Hirschi, J; Marotzke, J; Johns, W; Baringer, M; Meinen, C; Beal, L, 2006. Transport variability associated with the Meridional Overturning circulation in the Subtropical North Atlantic. EOS, Transactions, American Geophysical Union [EOS Trans. Am. Geophys. Union]. Vol. 87, no. 36, suppl., [np]. suppl., Sep 2006.

Meinen, C. S., M. O. Baringer, and S. L. Garzoli, Variability in transports along the subtropical Atlantic western boundary: Implications for monitoring the MOC, EGU General Assembly, April 2-7, 2006, Vienna, Austria.

Meinen, C. S., M. O. Baringer, and S. L. Garzoli, Transport variability along the subtropical Atlantic western boundary: Implications for monitoring the Meridional Overturning Circulation, Office of Climate Observations Review Workshop, May 10-12, 2006, Silver Spring, Maryland.

FY2005

Baringer, M. O., C. S. Meinen, C. N. K. Mooers, I. Bang, R. F. Garcia, F. Bub, R. Rhodes, Western Boundary Current changes along the Florida Coast: A comparison of the Global NCOM model to observations, Eos Trans. AGGU, 86(18), Jt. Assem. Suppl., (AGU 2005 Joint Assembly Meeting, 23—27 May 2005, New Orleans, LA), Abstract OS32A-02.

Johns, W., S. Cunningham, M. Baringer, L. Beal, D. Shoosmith, J. Hirschi, J. Baehr, J. Marotzke, and H. Bryden, 2005. An Observing System to Monitor the Atlantic Meridional Overturning Circulation and Heat Flux at 26N, U.S. CLIVAR Atlantic Science Conference, 31 January – 2 February 2005, Miami.

Christopher S. Meinen, Molly O. Baringer, Deb Shoosmith and Rigoberto F. Garcia, 2005. The Florida Current: Long term measurements of the transport of the upper limb of the Meridional Overturning Cell, U.S. CLIVAR Atlantic Science Conference, 31 January – 2 February 2005, Miami.

Garzoli S. L. and M. Baringer, 2005. Meridional heat transport in the South Atlantic. U.S. CLIVAR Atlantic Science Conference, 31 January – 2 February 2005, Miami.

Cunningham, S., J. Hirschi, J. Marotzke, W. Johns, M. Baringer and H. Bryden, 2004, A Moored Array to Monitor the North Atlantic Thermohaline Circulation at 26°N, CLIVAR North Atlantic Thermohaline Circulation Variability Workshop, Sept 13-16, 2004, Kiel Germany.

Garzoli, S. L. and M. Baringer, 2004, Meridional Heat Transport in the South Atlantic. CLIVAR North Atlantic Thermohaline Circulation Variability Workshop, Sept 13-16, 2004, Kiel Germany.

Shoosmith, D. R., M. O. Baringer and W. E. Johns, 2004, Towards a Continuous Record of Florida Current Temperature Transport. CLIVAR North Atlantic Thermohaline Circulation Variability Workshop, Sept 13-16, 2004, Kiel Germany.

Meinen, C. S., M. O. Baringer, A. H. Flosadottir, R. F. Garcia, L. Johns, R. H. Smith, and J. Larsen, Florida Current Transport, 2004. (SEA-COOS Spring 2004 Workshop, May 17-18, Miami, FL)

Meetings Attended:

FY2013:

Fall, 2012, Ronald H. Brown Users Meeting, Charlston, SC. (Baringer)

April, 20130, SOOPIP Meeting, Victoria, Canada.

May 27-30, 2013, OceanSites meeting, Seoul,South Korea (Baringer)

FY2012:

Sep 11th – Sep 15th, 2012, International CLIVAR Atlantic Implementation Panel, Kiel, Germany (Baringer)

Aug 13th – Aug 17th, 2012, US AMOC PI Meeting, Boulder, CO (Baringer, Garzoli, Goni)

July 6th-July 16th, 2012, National Proposal Review Panel, Washington, DC (Baringer)

June 25th – June 27th, 2012, NOAA OCO/CPO Annual Review, Washington, DC (Baringer, Garzoli, Goni)

April 17th – April 19th, 2012, NOAA Leadership Competencies Development Program Meeting, Washington, DC (Baringer)

FY2011:

October 18-20, 2010 – Climate Monitoring Summit, Camp Springs, MD

October 27 – 29, 2010 – Climate Obsevations Division's Annual Ocean Observations System Review, Silver Spring, MD.

February 9-11, 2011 – NOAA Integrated Process Team Meeting, Silver Spring, MD.

March 23-25, 2011 – VAMOS Workshop, Miami, FL.

March 25-26, 2011 – International Clivar Implementation Panel Meeting, Miami, FL.

July 7-9, 2011 – XBT Science Workshop, Melbourne, Australia.